

## ITEM: 4UZC7 - Buffer Package pH 4.0 7.0 and 10.

PICK REQ: 1118314558

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: B5737

This MSDS should be attached or kept with the respective product with which it is associated.

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MATERIAL SAFETY DATA SHEET - B5737

Associated Grainger Item: 4UZC7 - Buffer Package pH 4.0 7.0 and 10.

## MATERIAL SAFETY DATA SHEET

NCL OF WISCONSIN, INC.

PO BOX 8

BURNHAMWOOD, WI 54414

EMERGENCY TELEPHONE NO: 800-424-9300 (CHEMTEC)

DATE OF THIS REVISION: 11-02-2004

PRODUCT IDENTIFICATION:

PRODUCT NAME: YSI 3821 BUFFER SOLUTION, PH = 4.0

SYNONYMS: NONE.

MOLECULAR WEIGHT: NA

CHEMICAL NAME: NA

CHEMICAL FAMILY: NA

PRODUCT CAS#: NA

FORMULA: NA

## INGREDIENTS:

1. POTASSIUM ACID PHTHALATE

CAS# 877-24-7

PERCENT: 2

SARA: NOT LISTED

TYP: NOT ESTABLISHED.

PEL: NOT ESTABLISHED.

HAZARD: MAY CAUSE EYE AND RESPIRATORY TRACT IRRITATION.

2. RED FOOD COLORING

CAS# NOT LISTED.

PERCENT: 40.0

SARA: NOT LISTED

TYP: NOT ESTABLISHED.

PEL: NOT ESTABLISHED.

HAZARD: NONE KNOWN.

3. DETONIZED WATER

CAS# 7732-18-5

PERCENT: &gt;99

SARA: NOT LISTED

TYP: NOT APPLICABLE

PEL: NOT APPLICABLE

HAZARD: NONE.

## PRECAUTIONARY MEASURES:

AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. WASH THOROUGHLY AFTER HANDLING.

MINIMAL CONTACT, AS WITH ALL CHEMICALS, IS A GOOD POLICY TO FOLLOW.

## EMERGENCY/FIRST AID:

IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN OR EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IF SWALLOWED, GIVE TWO GLASSES OF WATER OR MILK TO DILUTE. CALL A PHYSICIAN.

DOT HAZARD CLASS: NOT REGULATED

## PHYSICAL DATA SECTION ONE

APPEARANCE: CLEAR PINK SOLUTION

ODOR: ODORLESS

SOLUBILITY: INFINITELY SOLUBLE IN WATER.

BOILING POINT: 100 DEG. C (212 DEG. F)

MELTING POINT: 0 DEG. C (32 DEG. F)

SPECIFIC GRAVITY: 1.0

VAPOR DENSITY (AIR=1): ESSENTIALLY THE SAME AS WATER.

VAPOR PRESSURE (MM HG): ESSENTIALLY THE SAME AS WATER.

EVAPORATION RATE: ESSENTIALLY THE SAME AS WATER.

## FIRE AND EXPLOSION INFORMATION SECTION TWO

FIRE: NOT CONSIDERED TO BE A FIRE HAZARD.

EXPLOSION: NOT CONSIDERED TO BE AN EXPLOSION HAZARD

FIRE EXTINGUISHING MEDIA:

USE ANY SUITABLE MEANS FOR EXTINGUISHING SURROUNDING FIRE.

## REACTIVITY DATA SECTION THREE

STABILITY: STABLE UNDER ORDINARY CONDITIONS OF USE AND STORAGE

## HAZARDOUS DECOMPOSITION PRODUCTS:

MAY EMIT TOXIC FUMES OF CARBON MONOXIDE, CARBON DIOXIDE, AND POTASSIUM OXIDE IF INVOLVED IN A FIRE.

HAZARDOUS POLYMERIZATION: THIS SUBSTANCE DOES NOT POLYMERIZE.

INCOMPATIBILITIES: STRONG SOLUTIONS OF NITRIC ACID.

## LEAK/SPILL/DISPOSAL INFORMATION SECTION FOUR

FLUSH TO SEWER WITH LARGE AMOUNTS OF WATER.

ENSURE COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

REPORTABLE QUANTITY: 5000 LBS.

## HEALTH HAZARD INFORMATION SECTION FIVE

## A. EXPOSURE/HEALTH EFFECTS:

IRRITATION: MAY CAUSE IRRITATION TO MUCOUS MEMBRANES DUE TO SLIGHT ACIDITY.

## INGESTION:

LARGE DOSSES MAY CAUSE NAUSEA, VOMITING AND ABNORMAL SENSATIONS IN HANDS AND FEET. BECAUSE OF SLIGHT ACIDITY, MAY CAUSE IRRITATION TO MUCOUS MEMBRANES.

SKIN CONTACT: MAY CAUSE IRRITATION, REDNESS, AND PAIN.

EYE CONTACT: MAY CAUSE IRRITATION AND DAMAGE.

CHRONIC EXPOSURE: NO INFORMATION FOUND.

CANCER INFORMATION: NO INFORMATION FOUND FOR ANY INGREDIENT

AGGRAVATION OF PRE-EXISTING CONDITIONS: NO INFORMATION FOUND

## B. FIRST AID:

## INHALATION:

MOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN.

## INGESTION:

IF SWALLOWED, GIVE TWO GLASSES OF WATER TO DILUTE. GIVE MEDICAL ATTENTION IMMEDIATELY.

## SKIN EXPOSURE:

IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS OR PERSISTS.

## EYE EXPOSURE:

WASH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, LIFTING LOWER AND UPPER EYELIDS OCCASIONALLY. GET MEDICAL ATTENTION IMMEDIATELY.

## OCCUPATIONAL CONTROL MEASURES SECTION SIX

## VENTILATION SYSTEM:

IN GENERAL, DILUTION VENTILATION IS A SATISFACTORY HEALTH HAZARD CONTROL FOR THIS MATERIAL. HOWEVER, IF CONDITIONS OF USE CREATE DISCOMFORT TO A WORKER, A LOCAL EXHAUST SHOULD BE CONSIDERED.

## PERSONAL RESPIRATORS (NIOSH APPROVED):

FOR CONDITIONS OF USE WHERE EXPOSURE TO MIST EXISTS, A DUST/NEST RESPIRATOR MAY BE WORN. FOR EMERGENCIES, A SELF-CONTAINED BREATHING APPARATUS MAY BE NECESSARY.

SKIN PROTECTION: RUBBER GLOVES AND LAB COAT, APRON OR OVERALLS.

## EYE PROTECTION:

USE CHEMICAL SAFETY GOGGLES AND/OR A FULL FACE SHIELD WHERE SPLASHING IS POSSIBLE. CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH THIS MATERIAL.

MAINTAIN EYE-WASH FOUNTAIN AND QUICK-DRENCH FACILITIES IN WORK AREAS.

## STORAGE AND SPECIAL INFORMATION SECTION SEVEN

KEEP IN A TIGHTLY CLOSED CONTAINER. PROTECT CONTAINER FROM PHYSICAL DAMAGE.

THE INFORMATION CONTAINED HEREIN IS PROVIDED IN GOOD FAITH AND IS BELIEVED TO BE CORRECT AS OF THE DATE HEREOF. HOWEVER, NCL OF WISCONSIN, INC. MAKES NO REPRESENTATION AS TO THE COMPREHENSIVENESS OR ACCURACY OF THE INFORMATION. IT IS EXPECTED THAT INDIVIDUALS RECEIVING THE INFORMATION WILL EXERCISE THEIR INDEPENDENT JUDGMENT IN DETERMINING ITS APPROPRIATENESS FOR A PARTICULAR PURPOSE. ACCORDINGLY, NCL OF WISCONSIN, INC WILL NOT BE RESPONSIBLE FOR DAMAGES OF ANY KIND RESULTING FROM THE USE OF OR RELIANCE UPON SUCH INFORMATION. NO REPRESENTATIONS, OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR TO THE PRODUCT TO WHICH THE INFORMATION REFERS.

YSI 3821

11/02/2004

DMG #A96023

REV C

ITEM: 4UZC7 - Buffer Package pH 4.0 7.0 and 10.

PICK REQ: 1118314558

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: B5738

This MSDS should be attached or kept with the respective product with which it is associated.

##### MATERIAL SAFETY DATA SHEET - B5738 #####

Associated Grainger Item: 40ZC7 - Buffer Package pH 4.0 7.0 and 10.

MATERIAL SAFETY DATA SHEET

NCL OF WISCONSIN, INC.  
PO BOX 8  
BIRNBAUMOOD, WI 54414

EMERGENCY TELEPHONE NO: 800-424-9300 (CHEMTREC)

DATE OF THIS REVISION: 11-02-2004

PRODUCT IDENTIFICATION:

PRODUCT NAME: YSI 3822 BUFFER SOLUTION, pH = 7.00

SYNONYMS: NONE.

CHEMICAL NAME: NA

PRODUCT CAS#: NA

MOLECULAR WEIGHT: NA

CHEMICAL FAMILY: NA

FORMULA: NA

INGREDIENTS:

1. POTASSIUM PHOSPHATE MONOBASIC  
CAS#: 7778-77-0

PERCENT: <1

SARA: NOT LISTED.

TLV: NOT ESTABLISHED.

PEL: NOT ESTABLISHED.

HAZARD: MODERATELY TOXIC - MAY CAUSE IRRITATION.

2. SODIUM HYDROXIDE  
CAS#: 1310-73-2.

PERCENT: <1

SARA: NOT LISTED

TLV: 2 MG/M3

PEL: 2 MG/M3

3. YELLOW FOOD COLORING  
CAS#: NOT LISTED.

PERCENT: <0.02

SARA: NOT LISTED.

TLV: NOT ESTABLISHED.

PEL: NOT ESTABLISHED.

HAZARD: NONE KNOWN.

4. DEIONIZED WATER  
CAS#: 7732-18-5

PERCENT: >98

SARA: NOT LISTED

TLV: NOT APPLICABLE

PEL: NOT APPLICABLE

HAZARD: NONE.

PRECAUTIONARY MEASURES:

AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. WASH THOROUGHLY AFTER HANDLING.  
MINIMAL CONTACT, AS WITH ALL CHEMICALS, IS A GOOD POLICY TO FOLLOW.

EMERGENCY/FIRST AID:

IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN OR EYES WITH PLenty OF WATER FOR AT LEAST 15 MINUTES. IF SWALLOWED, GIVE TWO GLASSES OF WATER OR MILK TO DILUTE. CALL A PHYSICIAN.

DOT HAZARD CLASS: NOT REGULATED

SECTION ONE PHYSICAL DATA

APPEARANCE: CLEAR YELLOW SOLUTION

ODOR: ODORLESS

SOLUBILITY: INFINITELY SOLUBLE IN WATER.

BOILING POINT: 100 DEG. C (212 DEG. F)

MELTING POINT: 0 DEG. C (32 DEG. F)

SPECIFIC GRAVITY: 1.0

VAPOR DENSITY (AIR=1): ESSENTIALLY THE SAME AS WATER.

VAPOR PRESSURE (MM HG): ESSENTIALLY THE SAME AS WATER.

EVAPORATION RATE: ESSENTIALLY THE SAME AS WATER.

SECTION TWO FIRE AND EXPLOSION INFORMATION

FIRE: NOT CONSIDERED TO BE A FIRE HAZARD.

EXPLOSION: NOT CONSIDERED TO BE AND EXPLOSION HAZARD

FIRE EXTINGUISHING MEDIA:

USE ANY SUITABLE MEANS FOR EXTINGUISHING SURROUNDING FIRE.

SECTION THREE REACTIVITY DATA

STABILITY: STABLE UNDER ORDINARY CONDITIONS OF USE AND STORAGE

HAZARDOUS POLYMERIZATION: THIS SUBSTANCE DOES NOT POLYMERIZE.  
INCOMPATIBILITIES: NONE KNOWN.

SECTION FOUR LEAK/SPILL/DISPOSAL INFORMATION

FLUSH TO SEWER WITH LARGE AMOUNTS OF WATER.  
ENSURE COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS  
REPORTABLE QUANTITY: 5000 LBS.

SECTION FIVE HEALTH HAZARD INFORMATION

A. EXPOSURE/HEALTH EFFECTS:  
INHALATION: NO INFORMATION FOUND.  
INGESTION: LARGE DOSES MAY CAUSE DIARRHEA.  
SKIN CONTACT: PROLONGED CONTACT MAY CAUSE IRRITATION.  
EYE CONTACT: MAY CAUSE IRRITATION AND DAMAGE.

CHRONIC EXPOSURE:  
POTASSIUM PHOSPHATE, ONE OF THE INGREDIENTS, MAY SEQUESTER CALCIUM AND CAUSE  
CALCIUM PHOSPHATE DEPOSITS IN THE KIDNEYS.

CANCER INFORMATION: NO INFORMATION FOUND FOR ANY INGREDIENT  
AGEGRAVATION OF PRE-EXISTING CONDITIONS: NO INFORMATION FOUND

B. FIRST AID:

INHALATION:  
REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF  
BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN.

INGESTION:  
IF SWALLOWED, GIVE TWO GLASSES OF WATER TO DILUTE. GIVE MEDICAL ATTENTION  
IMMEDIATELY.

SKIN EXPOSURE:  
IMMEDIATELY FLUSH SKIN WITH PLenty OF WATER FOR AT LEAST 15 MINUTES WHILE  
REMOVING CONTAMINATED CLOTHING. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS  
OR PERSISTS.

EYE EXPOSURE:  
WASH EYES WITH PLenty OF WATER FOR AT LEAST 15 MINUTES, LIFTING LOWER AND  
UPPER EYELIDS OCCASIONALLY. GET MEDICAL ATTENTION IMMEDIATELY.

SECTION SIX OCCUPATIONAL CONTROL MEASURES

VENTILATION SYSTEM:  
IN GENERAL, DILUTION VENTILATION IS A SATISFACTORY HEALTH HAZARD CONTROL. FOR  
THIS MATERIAL, HOWEVER, IF CONDITIONS OF USE CREATE DISCOMFORT TO A WORKER,  
A LOCAL EXHAUST SHOULD BE CONSIDERED.

PERSONAL RESPIRATORS (NIOSH APPROVED):  
FOR CONDITIONS OF USE WHERE EXPOSURE TO MIST EXISTS, A DUST/MIST RESPIRATOR  
MAY BE WORN. FOR EMERGENCIES, A SELF-CONTAINED BREATHING APPARATUS MAY BE  
NECESSARY.

SKIN PROTECTION: RUBBER GLOVES AND LAB COAT, APRON OR OVERALLS.

EYE PROTECTION:  
USE CHEMICAL SAFETY GOGGLES AND/OR A FULL FACE SHIELD WHERE SPLASHING IS  
POSSIBLE. CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH THIS MATERIAL.

MAINTAIN EYE-WASH FOUNTAIN AND QUICK-DRENCH FACILITIES IN WORK AREAS.

SECTION SEVEN STORAGE AND SPECIAL INFORMATION

KEEP IN A TIGHTLY CLOSED CONTAINER. PROTECT CONTAINER FROM PHYSICAL DAMAGE.

THE INFORMATION CONTAINED HEREIN IS PROVIDED IN GOOD FAITH AND IS BELIEVED  
TO BE CORRECT AS OF THE DATE HEREOF. HOWEVER, NCL OF WISCONSIN, INC. MAKES  
NO REPRESENTATION AS TO THE COMPREHENSIVENESS OR ACCURACY OF THE  
INFORMATION. IT IS EXPECTED THAT INDIVIDUALS RECEIVING THE INFORMATION WILL  
EXERCISE THEIR INDEPENDENT JUDGMENT IN DETERMINING ITS APPROPRIATENESS FOR A  
PARTICULAR PURPOSE. ACCORDINGLY, NCL OF WISCONSIN, INC WILL NOT BE  
RESPONSIBLE FOR DAMAGES OF ANY KIND RESULTING FROM THE USE OF OR RELIANCE  
UPON SUCH INFORMATION, NO REPRESENTATIONS, OR WARRANTIES, EITHER EXPRESS OR  
IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY  
OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO THE INFORMATION SET FORTH  
HEREIN OR TO THE PRODUCT TO WHICH THE INFORMATION PERTAINS.

YSI 3822

11/02/2004

DWG #: A96024

REV: C

## ITEM: 4UZC7 - Buffer Package pH 4.0 7.0 and 10.

PICK REQ: 1118314558

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: B5739

**This MSDS should be attached or kept with the respective product with which it is associated.**

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MATERIAL SAFETY DATA SHEET - B5739

Associated Graining Item: 4UZC7 - Buffer Package pH 4.0 7.0 and 10.

## MATERIAL SAFETY DATA SHEET

NCL OF WISCONSIN, INC.  
PO BOX 8  
BIRNWOOD, WI 54414

EMERGENCY TELEPHONE NO.: 800-424-9300 (CHEMTREC)

DATE OF THIS REVISION: 11-02-2004

## PRODUCT IDENTIFICATION:

PRODUCT NAME: YSI 3823 BUFFER SOLUTION, PH = 10.00

SYNONYMS: NONE.

MOLECULAR WEIGHT: NA

CHEMICAL NAME: NA

CHEMICAL FAMILY: NA

PRODUCT CAS#: NA

FORMULA: NA

## INGREDIENTS:

## 1. DISODIUM EDTA DEHYDRATE

CAS#: 6381-92-6

PERCENT: 1

SARA: NOT LISTED

TLV: NOT ESTABLISHED.

PEL: NOT ESTABLISHED.

HAZARD: SLIGHT. MAY CAUSE IRRITATION. MODERATELY TOXIC BY INGESTION.

## 2. POTASSIUM CARBONATE

CAS#: 584-08-7

PERCENT: &lt;1

SARA: NOT LISTED

TLV: NOT ESTABLISHED.

PEL: NOT ESTABLISHED.

HAZARD: SLIGHT. CAUSES IRRITATION.

## 3. POTASSIUM BORATE

CAS#: 12228-88-5.

PERCENT: &lt;1

SARA: NOT LISTED

TLV: NOT ESTABLISHED.

PEL: NOT ESTABLISHED.

HAZARD: UNKNOWN

## 4. POTASSIUM HYDROXIDE

CAS#: 1310-58-3

PERCENT: &lt;1

SARA: LISTED

TLV: 2 MG/M3

PEL: 2 MG/M3

HAZARD: MODERATE. MAY CAUSE BURNS.

## 5. BLUE FOOD COLORING

CAS#: NOT LISTED.

PERCENT: 0.02

SARA: NOT LISTED

TLV: NOT ESTABLISHED.

PEL: NOT ESTABLISHED.

HAZARD: NONE KNOWN.

## 6. DEIONIZED WATER

CAS#: 7732-18-5

PERCENT: &gt;98

SARA: NOT LISTED

TLV: NOT APPLICABLE.

PEL: NOT APPLICABLE.

HAZARD: NONE.

## PRECAUTIONARY MEASURES:

AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. WASH THOROUGHLY AFTER HANDLING.  
AVOID CONTACT, AS WITH ALL CHEMICALS, IS A GOOD POLICY TO FOLLOW.

## EMERGENCY/FIRST AID:

IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN OR EYES WITH PLenty OF WATER FOR AT LEAST 15 MINUTES. IF SWALLOWED, GIVE TWO GLASSES OF WATER OR MILK TO DILUTE. CALL A PHYSICIAN.

DOT HAZARD CLASS: NOT REGULATED

## PHYSICAL DATA SECTION ONE

APPEARANCE: CLEAR BLUE SOLUTION.

ODOR: ODORLESS

SOLUBILITY: INFINITELY SOLUBLE IN WATER.

BOILING POINT: 100 DEG. C (212 DEG. F)

MELTING POINT: 0 DEG. C (32 DEG. F)

SPECIFIC GRAVITY: 1.0

VAPOR DENSITY (AIR=1): ESSENTIALLY THE SAME AS WATER.

VAPOR PRESSURE (MM HG): ESSENTIALLY THE SAME AS WATER.

## FIRE AND EXPLOSION INFORMATION SECTION TWO

FIRE: NOT CONSIDERED TO BE A FIRE HAZARD.

EXPLOSION: NOT CONSIDERED TO BE AN EXPLOSION HAZARD

FIRE EXTINGUISHING MEDIA:

USE ANY SUITABLE MEANS FOR EXTINGUISHING SURROUNDING FIRE.

## REACTIVITY DATA SECTION THREE

STABILITY: STABLE UNDER ORDINARY CONDITIONS OF USE AND STORAGE

HAZARDOUS DECOMPOSITION PRODUCTS: NONE KNOWN.

HAZARDOUS POLYMERIZATION: THIS SUBSTANCE DOES NOT POLYMERIZE.

INCOMPATIBILITIES: NONE KNOWN.

## LEAK/SPILL/DISPOSAL INFORMATION SECTION FOUR

FLUSH TO SEWER WITH LARGE AMOUNTS OF WATER.

ENSURE COMPLIANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

REPORTABLE QUANTITY: 5000 LBS.

## HEALTH HAZARD INFORMATION SECTION FIVE

## A. EXPOSURE/HEALTH EFFECTS:

INHALATION: MAY CAUSE SORE THROAT AND IRRITATION TO MUCOUS MEMBRANES.

INGESTION: IF SUFFICIENT AMOUNTS ARE INGESTED, SYSTEMIC POISONING MAY OCCUR.

SKIN CONTACT: PROLONGED CONTACT MAY CAUSE IRRITATION.

EYE CONTACT: MAY CAUSE IRRITATION.

CHRONIC EXPOSURE: NO INFORMATION FOUND FOR ANY INGREDIENT.

CANCER INFORMATION: NO INFORMATION FOUND FOR ANY INGREDIENT

AGGRAVATION OF PRE-EXISTING CONDITIONS: NO INFORMATION FOUND

## B. FIRST AID:

INHALATION: REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CALL A PHYSICIAN.

INGESTION:

IF SWALLOWED, GIVE TWO GLASSES OF WATER TO DILUTE. GIVE MEDICAL ATTENTION IMMEDIATELY.

SKIN EXPOSURE:

IMMEDIATELY FLUSH SKIN WITH PLenty OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS OR PERSISTS.

EYE EXPOSURE:

WASH EYES WITH PLenty OF WATER FOR AT LEAST 15 MINUTES, LIFTING LOWER AND UPPER EYELIDS OCCASIONALLY. GET MEDICAL ATTENTIONS IMMEDIATELY.

## OCCUPATIONAL CONTROL MEASURES SECTION SIX

## VENTILATION SYSTEM:

IN GENERAL, DILUTION VENTILATION IS A SATISFACTORY HEALTH HAZARD CONTROL FOR THIS MATERIAL. HOWEVER, IF CONDITIONS OF USE CREATE DISCOMFORT TO A WORKER, A LOCAL EXHAUST SHOULD BE CONSIDERED.

## PERSONAL RESPIRATORS (NIOSH APPROVED):

FOR CONDITIONS OF USE WHERE EXPOSURE TO MIST EXISTS, A DUST/MIST RESPIRATOR MAY BE WORN. FOR EMERGENCIES, A SELF-CONTAINED BREATHING APPARATUS MAY BE NECESSARY.

SKIN PROTECTION: RUBBER GLOVES AND LAB COAT, APRON OR OVERALLS.

## EYE PROTECTION:

USE CHEMICAL SAFETY GOGGLES AND/OR A FULL FACE SHIELD WHERE SPLASHING IS POSSIBLE. CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING WITH THIS MATERIAL. MAINTAIN EYE-WASH FOUNTAIN AND QUICK-DRENCH FACILITIES IN WORK AREAS.

## STORAGE AND SPECIAL INFORMATION SECTION SEVEN

KEEP IN A TIGHTLY CLOSED CONTAINER. PROTECT CONTAINER FROM PHYSICAL DAMAGE.

THE INFORMATION CONTAINED HEREIN IS PROVIDED IN GOOD FAITH AND IS BELIEVED TO BE CORRECT AS OF THE DATE HEREOF. HOWEVER, NCL OF WISCONSIN, INC. MAKES NO REPRESENTATION AS TO THE COMPREHENSIVENESS OR ACTUACY OF THE INFORMATION. IT IS EXPECTED THAT INDIVIDUALS RECEIVING THE INFORMATION WILL EXERCISE THEIR INDEPENDENT JUDGMENT IN DETERMINING ITS APPROPRIATENESS FOR A PARTICULAR PURPOSE. ACCORDINGLY, NCL OF WISCONSIN, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES OF ANY KIND RESULTING FROM THE USE OF OR RELIANCE UPON SUCH INFORMATION. NO REPRESENTATIONS, OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREIN WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR TO THE PRODUCT TO WHICH THE INFORMATION REFERS.

YSI 3823

## ITEM: 2EJR3 - Butyl Tape Non-curing Color Gray 2

PICK\_REQ: 1118314558

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: B1700

This MSDS should be attached or kept with the respective product with which it is associated.

#####  
MATERIAL SAFETY DATA SHEET - B1700

Associated Grainger Item: 2EJR3 - Butyl Tape Non-curing Color Gray 2

## MATERIAL SAFETY DATA SHEET

PERMATIVE(R\*)  
DIVISION OF DSIPERMATIVE MFG. DIVISION  
14551 JUDICIAL ROAD  
STE. 115  
BURNSVILLE, MN 55306

EMERGENCY: 800-817-1827

INFORMEC: 800-535-5053

C-1 INSTA-SEAL

REVISED: OCTOBER 2006

HMIS RATING:  
HEALTH 0  
FLAMMABILITY 0  
REACTIVITY 0

## HMIS HAZARD IDENTIFICATION SYSTEM:

0-MINIMAL  
1-SLIGHT  
2-MODERATE  
3-HIGH  
4-EXTREME  
\*-CHRONIC

## SECTION I - IDENTITY

TRADE NAME: C-1 INSTA-SEAL

PRODUCT CLASS: GLAZING COMPOUND N.O.S.

D.O.T.#: N/A

UN#: N/A

D.O.T. HAZARDOUS CLASS: N/A

## SECTION II - HAZARDOUS INGREDIENTS

| INGREDIENT            | CAS NUMBER    | WT %           |
|-----------------------|---------------|----------------|
| CALCIUM CARBONATE     | 1317-65-3     | 68             |
| PLASTISIZER           | 9003-29-6     | 23             |
| THERMO PLASTIC RUBBER | 66070-58-4    | 8              |
| HYDRO CARBON RESIN    | 68441-37-2    | .9             |
| ANTI OXIDANT          | 68610-51-5    | .1             |
| INGREDIENT            | ACGIH TLV-TWA | ACGIH TLV-STEL |
| CALCIUM CARBONATE     |               | OSHA PEL-TWA   |
| PLASTISIZER           | N/A           | N/A            |
| THERMO PLASTIC N/A    | N/A           | N/A            |
| RUBBER                | N/A           | N/A            |
| HYDRO CARBON RESIN    | N/A           | N/A            |
| ANTI OXIDANT          | N/A           | N/A            |

## SECTION III - PHYSICAL &amp; CHEMICAL CHARACTERISTICS

BOILING POINT (DEG. F): N/A

WT/GALLON: N/A

EVAPORATION RATE (BUTYL ACETATE = 1): N/A

VOLATILE BY (%) VOLUME: N/A

VAPOR DENSITY BY VOLUME (AIR = 1): N/A

## SECTION IV - FIRE &amp; EXPLOSION HAZARD DATA

FLASH POINT (TTC): N/A

UPPER FLAMMABLE LIMITS (% IN AIR): N/A  
LOWER FLAMMABLE LIMITS (% IN AIR): N/A

EXTINGUISHING MEDIA: CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER

SPECIAL FIRE FIGHTING PROCEDURES:

FIREFIGHTERS SHOULD WEAR A SELF-CONTAINED BREATHING APPARATUS

UNUSUAL FIRE AND EXPLOSION: N/A

## SECTION V - REACTIVITY DATA

STABILITY: STABLE

CONDITIONS TO AVOID: N/A

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZING AGENTS

HAZAROUS DECOMPOSITION AND DECOMPOSITION PRODUCTS:  
CARBON MONOXIDE, CARBON DIOXIDE, ALDEHYDES AND OTHER ORGANIC DECOMPOSITION PRODUCTS

## SECTION VI - TOXICOLOGICAL PROPERTIES

ROUTES OF ENTRY: SKIN EXPOSURE

EFFECTS OF EXPOSURE TO PRODUCTS: MAY CAUSE SOME TRANSIENT REDDENING OF SKIN

EFFECTS OF CHRONIC EXPOSURE TO PRODUCTS: NONE CURRENTLY KNOWN

EXPOSURE LIMITS: N/A

IRRITANCY TO PRODUCT: NO EVIDENCE

SENSITIVITY TO PRODUCT: NO EVIDENCE

CARCINOGENICITY OF PRODUCT: NO EVIDENCE

REPRODUCTIVE TOXICITY: NO EVIDENCE

MUTAGENICITY: NO EVIDENCE

SYNERGISTIC PRODUCTS: NO EVIDENCE

## SECTION VII - PREVENTATIVE MEASURES

PERSONAL PROTECTIVE EQUIPMENT:

RESPIRATOR: NOT REQUIRED IN WELL VENTILATED AREA

GLOVES: NOT REQUIRED

EYE: GOGGLES OR GLASSES OPTIONAL

CLOTHING: FOLLOW GOOD INDUSTRIAL STANDARDS

VENTILATION: USE IN ADEQUATE VENTILATION

HANDLING PROCEDURES: AVOID CONTACT WITH SKIN, EYES AND PROLONGED BREATHING

LEAKS AND SPILLS PROCEDURE:

CONTAIN AND DISPOSE OF ACCORDING TO LOCAL, STATE AND FEDERAL REGULATION

STORAGE REQUIREMENTS:

STORE IN A COOL, DRY PLACE AWAY FROM HEAT, ACIDS AND OXIDIZERS

WASTE DISPOSAL:

DISPOSE OF ACCORDING TO LOCAL, STATE AND FEDERAL REGULATIONS

HYGIENIC PRACTICES: OBSERVE NORMAL INDUSTRIAL HYGIENIC PRACTICES

## SECTION VIII - FIRST AID AND MEASURES

SPECIFIC MEASURES:

EYE CONTACT: FLUSH WITH WATER FOR AT LEAST 15 MINUTES. CONSULT PHYSICIAN

SKIN CONTACT: REMOVE WITH SOAP AND WATER

INHALATION: REMOVE TO FRESH AIR, IF PROBLEM PERSISTS CONSULT PHYSICIAN.

INGESTION: DO NOT INDUCE VOMITING. CONSULT PHYSICIAN IMMEDIATELY

## SECTION IX - SARA SECTION 133 SUPPLIER NOTIFICATION

CAS#:

CHEMICAL NAME:

PERCENT BY WT.: NOT REQUIRED

## SECTION X - PREPARATION INFORMATION

PREPARED BY: RESEARCH &amp; DEVELOPMENT

PHONE NUMBER: 952-898-3200

OTHER COMMENTS:

DISCLAIMER OF LIABILITY:

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# ITEM: 3TWU4 - Conductivity Calibration Solution

PICK REQ: 1118314558

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: L0346

**This MSDS should be attached or kept with the respective product with which it is associated.**

#####  
MATERIAL SAFETY DATA SHEET - L0346

Associated Grainger Item: 3TWU4 - Conductivity Calibration Solution

## HANNA INSTRUMENTS

HI 7031 CONDUCTIVITY CALIBRATION SOLUTION  
1413 (M/CRO)S/CM @ 25 DEG. C/77 DEG. F

HEALTH & SAFETY DATA SHEET

ACCORDING TO EC DIRECTIVE 91/155/EC AND FOLLOWING AMENDMENTS

DATE OF ISSUE: 20 SEPTEMBER 2004

SECTION 1 - IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

PRODUCT NAME:  
HI 7031 CONDUCTIVITY CALIBRATION SOLUTION, 1413  
(M/CRO)S/CM @ 25 DEG. C/77 DEG. F.

APPLICATION: FOR CALIBRATING ELECTRODES.

MANUFACTURER IDENTIFICATION:  
HANNA INSTRUMENTS ITALIA S.R.L.  
VIALE DELLE INDUSTRIE, 12/A  
35010 VILLAFRANCA PADOVANA  
ITALY

TEL. NO.: +39-049-9070211

EMERGENCY TELEPHONE NO.: NO HAZARDOUS PRODUCT

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

AQUEOUS SOLUTION.

SECTION 3 - HAZARD IDENTIFICATION

NO HAZARDOUS PRODUCT AS SPECIFIED IN DIRECTIVE 67/548/EEC.

SECTION 4 - FIRST AID MEASURES

AFTER INHALATION:  
IF INHALED REMOVE TO FRESH AIR. IF BREATHING BECOMES DIFFICULT, CALL A  
PHYSICIAN.

AFTER SKIN CONTACT: WASH OFF WITH WATER AND SOAP.

AFTER EYE CONTACT:  
RINSE OUT WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES.  
IF PAIN PERSISTS, SEEK MEDICAL ADVICE.

AFTER SWALLOWING:  
WASH OUT MOUTH WITH PLENTY OF WATER, PROVIDED PERSON IS CONSCIOUS.  
OBTAIN MEDICAL ATTENTION IF FEELING UNWELL.

SECTION 5 - FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA:  
WATER SPRAY, FOAM, DRY POWDER OR CARBON DIOXIDE.

SPECIAL RISKS: NON COMBUSTIBLE.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING:  
DO NOT STAY IN DANGEROUS ZONE WITHOUT SUITABLE CHEMICAL PROTECTION  
CLOTHING AND SELF-CONTAINED BREATHING APPARATUS.

ADDITIONAL INFORMATION: CONTAIN ESCAPING VAPORS WITH WATER.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: NONE

ENVIRONMENTAL PRECAUTIONS: NONE

SECTION 7 - HANDLING AND STORAGE

HANDLING: NO RESTRICTIONS

STORAGE:  
KEEP CONTAINER CLOSED AND PROTECTED FROM DIRECT SUNLIGHT.  
STORE AT ROOM TEMPERATURE (+15 DEG. C TO +25 DEG. C).

SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT: AS APPROPRIATE TO QUANTITY HANDLED.

PROTECTIVE GLOVES: RUBBER OR PLASTIC.

RESPIRATORY PROTECTION: REQUIRED WHEN VAPORS/AEROSOLS ARE GENERATED.

EYE PROTECTION: GOGGLES OR FACE MASK.

SECTION 9 - PHYSICAL/CHEMICAL PROPERTIES

APPEARANCE: COLORLESS LIQUID

DENSITY AT 20 DEG. C: APPROX. 1 G/CM3

ODOR: ODORLESS

FLASH POINT: NA

SOLUBILITY IN WATER: SOLUBLE

EXPLOSIVE PROPERTIES: NA

MELTING POINT: NA

EXPLOSION LIMITS: NA

BOILING POINT: >100 DEG. C

IGNITION TEMPERATURE: NA

pH VALUE AT 20 DEG. C: APPROX. 7

SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO BE AVOIDED:  
STRONG HEATING (ABOVE BOILING POINT)

STABLE IN THE RECOMMENDED STORAGE CONDITIONS.

HAZARDOUS DECOMPOSITION PRODUCTS:

IN THE EVENT OF FIRE: SEE SECTION 5.

SUBSTANCES TO BE AVOIDED: THE GENERALLY KNOWN REACTION PACKAGES OF WATER.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:  
QUANTITATIVE DATA ON THE TOXICITY OF THIS PRODUCT ARE NOT AVAILABLE.

FURTHER TOXICOLOGICAL INFORMATION:  
HAZARDOUS PROPERTIES CANNOT BE EXCLUDED, BUT ARE RELATIVELY UNLIKELY  
BECAUSE OF THE LOW CONCENTRATION OF THE DISSOLVED SUBSTANCES AND TO THE  
DATA OF THE COMPONENTS, WHEN THE PRODUCT IS HANDLED APPROPRIATELY.

FURTHER DATA:  
THE PRODUCT SHOULD BE HANDLED WITH THE CARE USUAL WHEN DEALING WITH  
CHEMICALS.

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXIC EFFECTS:  
QUANTITATIVE DATA ON THE ECOLOGICAL EFFECT OF THIS PRODUCT ARE NOT  
AVAILABLE.

FURTHER ECOLOGICAL DATA:  
NO ECOLOGICAL PROBLEMS ARE TO BE EXPECTED WHEN THE PRODUCT IS HANDLED  
AND USED WITH DUE CARE AND ATTENTION.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: CAN BE SAFELY DISPOSED OFF AS AN ORDINARY REFUSE.

SECTION 14 - TRANSPORT INFORMATION

NOT SUBJECT TO TRANSPORT REGULATIONS.

SECTION 15 - REGULATORY INFORMATION

LABELING ACCORDING TO EC DIRECTIVES:

SYMBOL:

R-PHRASES:

S-PHRASES:

CONTAINS:

SECTION 16 - OTHER INFORMATION

SUPersedes EDITION OF: JUNE 2002

REASON FOR REVISION: GENERAL UPDATE

LEGEND:

NA: NOT APPLICABLE

ND: NOT DETERMINED

THE INFORMATION CONTAINED HEREIN IS BASED ON THE PRESENT STATE OF OUR  
KNOWLEDGE. IT CHARACTERIZES THE PRODUCT WITH REGARD TO THE APPROPRIATE  
SAFETY PRECAUTIONS. IT DOES NOT REPRESENT A GUARANTEE OF THE PROPERTIES  
OF THE PRODUCT.

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